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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/721,326 | 11/22/2000 | Michael J. Barrett | A0602/7002 | 7238 |

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EXAMINER

LOGSDON, JOSEPH B

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ART UNIT PAPER NUMBER

2662

DATE MAILED: 12/19/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/721,326 | BARRETT ET AL. |
| | Examiner | Art Unit |
| | Joe Logsdon | 2662 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-39 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) Interview Summary (PTO-413) Paper No(s) _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

Objections:

1. The abstract of the disclosure is objected to because it is too long. The abstract must not exceed 150 words in length. Correction is required. See MPEP § 608.01(b).

2. Claims 3-14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim, i.e., claim 3, depends on both claim 1 and claim 2. Any multiple dependent claim must refer to claims from which it depends in the alternative only. See MPEP § 608.01(n). Accordingly, claims 3-14 have not been further treated on the merits.

Claim Rejections—35 U.S.C. 112, First Paragraph:

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 30-39 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. According to claim 30, information is provided to platforms along a signal pathway. But according to the specification this information is provided along a pathway traversed by the movable platforms (Figs. 2A-2H; see, e.g., page 7, line 25 to page 8, line 8). The specification

therefore fails to enable one of ordinary skill in the art to make or use the invention as claimed.

Claims 31-39 depend on claim 30 and are therefore similarly rejected.

Claim Rejections—35 U.S.C. 112, Second Paragraph:

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 30-39 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. According to claim 30, information is provided to platforms along a signal pathway. But according to the specification this information is provided along a pathway traversed by the movable platforms (Figs. 2A-2H; see, e.g., page 7, line 25 to page 8, line 8). Claims 31-39 depend on claim 30 and are therefore similarly rejected.

7. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. According to claim 2, a signal network does not exist between the at least one movable platform and a destination. It is unclear whether it is intended that no signal network exist between these points or that a specific signal network does not exist between these points. It is further unclear whether it is intended that no network exist between the entire group of

movable platforms that are involved in relaying the information from source to destination and the destination.

Claim Rejections—35 U.S.C. 102(b):

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 15-17, 19-25, 29-36, 38, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Simon et al:

With regard to claim 1, Simon et al. discloses a system and method for providing information to at least one destination in an area where signal coverage is not available from an information source (abstract). The destination can be part of a movable platform because the invention can enable information transmission between aircraft (column 2, lines 51-58). The invention inherently creates a communication network because the invention allows communication between source and destination to proceed in situations in which such communication would otherwise not be possible. The relay systems are carried on movable platforms (“aerodynes”) (abstract). Each movable platform (aerodyne) comprises a transceiver (column 2, lines 48-50). The information carrying signal is inherently received by a first movable receiver/transmitter unit within a signal coverage area of the information source, and the

information signal is inherently re-transmitted by the first movable receiver/transmitter to its destination because an information source (“emitting station”) transmits the signal, and the information carried by the signal is transmitted from one relay system to another relay system up to its destination (abstract). The destination inherently includes a receiver because it is a “receiving station” (abstract).

With regard to claim 15, Simon et al. discloses a system and method for providing information to and from a destination that is in an area where signal coverage is not available from an information source (abstract). Relay systems are carried on movable platforms (“aerodynes”) (abstract). Each movable platform (aerodyne) comprises a transceiver (column 2, lines 48-50). The information carrying signal is inherently received by a movable receiver/transmitter unit within a signal coverage area of the information source, the information signal is inherently re-transmitted by a movable receiver/transmitter to its destination, and the information source inherently includes a transmitter because an information source (“emitting station”) transmits the signal, and the information carried by the signal is transmitted from one relay system to another relay system up to its destination (abstract). The destination inherently includes a receiver because it is a “receiving station” (abstract).

With regard to claim 16, the transceiver onboard each aerodyne in Simon et al. is inherently located in an area where there is an already existing communication channel because the transceiver communicates. According to the most general definition of channel, a channel is simply a path along which a signal can be sent. If no such channel existed in the area of the transceiver onboard an aerodyne, the aerodyne would therefore be unable to communicate.

With regard to claim 17, Simon et al. teaches that there can be more than one relay system-equipped aerodyne involved in the communication from source to destination (Fig. 1; column 2, lines 38-41; column 2, lines 59-64).

With regard to claim 19, Simon et al. teaches that the movable platforms are aircraft (“aerodynes”) (abstract).

With regard to claims 20-25, Simon et al. teaches that the positions and directions of motion of the movable platforms can change in an almost random manner from one instant to another (column 2, lines 42-47). The movable platforms can therefore be located on the same pathway or a parallel pathway or an intersecting pathway, and can travel in the same or opposite directions or to or from the intersections of their pathways regardless of their relative locations or pathways.

With regard to claim 29, each aerodyne in Simon et al. is inherently both a pathway station and a pathway control station because each aerodyne monitors the movable platforms (other aerodynes) along a pathway because aerodynes can link up with each other momentarily to pass information in the form of data packets between each other when necessary (column 1, line 64 to column 5, line 5); each aerodyne is inherently coupled to itself; each aerodyne is inherently coupled to an existing packet-based data network because it forwards received data packets to other aerodynes or to the destination (column 1, lines 50-55; column 64 to column 2, line 5); and each aerodyne inherently controls communication between itself and the existing packet-based data network because each aerodyne is part of the existing packet-based data network (column 1, lines 50-55; column 64 to column 2, line 5).

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With regard to claim 30, Simon et al. discloses a system and method for providing information to movable platforms along a signal pathway (i.e., the path traversed by the signal as it propagates from source, to movable platform to movable platform, to destination) (abstract). Relay systems are carried on movable platforms (“aerodynes”) (abstract). Each movable platform (aerodyne) comprises a transceiver (column 2, lines 48-50). The destination can be part of a movable platform because the invention can enable information transmission between aircraft (column 2, lines 51-58). The information carrying signal is inherently received by a first movable receiver/transmitter unit, and the information signal is inherently re-transmitted by the first movable receiver/transmitter to another movable platform because an information source (“emitting station”) transmits the signal, and the information carried by the signal is transmitted from one relay system to another relay system up to its destination, which can also be a movable platform (abstract; column 2, lines 51-58). The destination inherently includes a receiver because it is a “receiving station” (abstract).

With regard to claims 31-36, Simon et al. teaches that the positions and directions of motion of the movable platforms can change in an almost random manner from one instant to another (column 2, lines 42-47). The movable platforms can therefore be located on the same pathway or a parallel pathway or an intersecting pathway, and can travel in the same or opposite directions or to or from the intersections of their pathways regardless of their relative locations or pathways.

With regard to claim 38, Simon et al. teaches that there can be more than one relay system-equipped aerodyne involved in the communication from source to destination (Fig. 1; column 2, lines 38-41; column 2, lines 59-64). Therefore, it is inherently the case that the steps

of receiving and re-transmitting are repeated with at least one additional transceiver located on a third movable platform.

With regard to claim 39, Simon et al. teaches that there can be four or more movable platforms that relay the signal toward its destination (Fig. 1). Therefore, it is inherently the case that the information signal can be re-transmitted to a receiver unit located on a fourth movable platform.

Claim Rejections—35 U.S.C. 102(e):

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

11. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

12. Claims 1, 15, 16, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Drummer.

With regard to claim 1, Drummer discloses a system and method for providing information to at least one destination in an area where signal coverage is not available from an information source; "signal coverage is not available" means that there is no guarantee of reliable radio communication (abstract; column 3, lines 9-28, especially lines 11-18). The destination can be part of a movable platform because the invention can enable information transmission between a geostationary station and a missile (column 3, lines 18-28). The invention inherently creates a communication network because the invention allows communication between source and destination to proceed in situations in which such communication would otherwise not be possible. The relay systems are carried on movable platforms (satellites, which can be LEO satellites, which move relative to the earth) (Fig. 1; column 3, lines 29-31; column 3, line 66 to column 4, line 3). Each satellite inherently comprises a transceiver because it transmits and receives (column 3, lines 29-36). Each missile comprises a transceiver (Fig. 2). Therefore, each movable platform comprises a transceiver. The information carrying signal is inherently received by a first movable receiver/transmitter unit within a signal coverage area of the information source, and the information signal is inherently re-transmitted by the first movable receiver/transmitter to its destination because information is exchanged between a stationary station (12 in Fig. 1) and a moving station (11 in Fig. 1) (column 3, lines 9-12), and the information is transmitted from the earth station to the satellite and then to the destination (the missile) (abstract; column 3, lines 29-36). The destination inherently includes a receiver because it receives the information (column 3, lines 9-12).

With regard to claim 15, Drummer discloses a system and method for providing information to and from a destination that is in an area where signal coverage is not available

from an information source; "signal coverage is not available" means that there is no guarantee of reliable radio communication (abstract; column 3, lines 9-28, especially lines 11-18). Relay systems are carried on movable platforms (satellites, which can be LEO satellites, which move relative to the earth) (Fig. 1; column 3, lines 29-31; column 3, line 66 to column 4, line 3). Each satellite inherently comprises a transceiver because it transmits and receives (column 3, lines 29-36). Each missile comprises a transceiver (Fig. 2). Therefore, each movable platform comprises a transceiver. The information carrying signal is inherently received by a first movable receiver/transmitter unit within a signal coverage area of the information source, and the information signal is inherently re-transmitted by the first movable receiver/transmitter to its destination because information is exchanged between a stationary station (12 in Fig. 1) and a moving station (11 in Fig. 1) (column 3, lines 9-12), and the information is transmitted from the earth station to the satellite and then to the destination (the missile) (abstract; column 3, lines 29-36). The destination inherently includes a receiver because it receives the information (column 3, lines 9-12).

With regard to claim 16, the transceiver onboard each aerodyne in Drummer is inherently located in an area where there is an already existing communication channel because the transceiver communicate. According to the most general definition of channel, a channel is simply a path along which a signal can be sent. If no such channel existed in the area of the transceiver onboard an aerodyne, the aerodyne would therefore be unable to communicate.

With regard to claim 30, Drummer discloses a system and method for providing information to movable platforms along a signal pathway (i.e., the path traversed by the signal as it propagates from source, to movable platform, to destination) (abstract; column 3, lines 29-36).

Relay systems are carried on movable platforms (satellites, which can be LEO satellites, which move relative to the earth) (Fig. 1; column 3, lines 29-31; column 3, line 66 to column 4, line 3). Each satellite inherently comprises a transceiver because it transmits and receives (column 3, lines 29-36). Each missile comprises a transceiver (Fig. 2). Therefore, each movable platform comprises a transceiver. The information carrying signal is inherently received by a first movable receiver/transmitter unit within a signal coverage area of the information source, and the information signal is inherently re-transmitted by the first movable receiver/transmitter to its destination because information is exchanged between a stationary station (12 in Fig. 1) and a moving station (11 in Fig. 1) (column 3, lines 9-12), and the information is transmitted from the earth station to the satellite and then to the destination (the missile) (abstract; column 3, lines 29-36). The destination inherently includes a receiver because it receives the information (column 3, lines 9-12).

Claim Rejections—35 U.S.C. 103(a):

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 18 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al. in view of Rootsey et al.

With regard to claim 18, Simon et al. fails to teach that the movable platforms can be ground vehicles. Rootsey et al. teaches that the movable platforms can be trains (abstract). Trains are ground vehicles. It would have been obvious to one of ordinary skill in the art to modify the invention of Simon et al. so that the movable platforms are ground vehicles, as in Rootsey et al. because such an arrangement would allow the movable platforms to be easily accessed for maintenance.

With regard to claim 28, Simon et al. fails to teach that a supplemental network communicates directly with a movable platform that is located in an area where there are insufficient movable platforms available to provide a signal to the movable platform. Rootsey et al. teaches that where supplemental networks exist, i.e., in populated areas with licensed terrestrial broadcasters, the repeater onboard the movable platform ("vehicle") is shut down (abstract). Because it is shut down, the movable platform is "unavailable" in the sense that it does not provide its service to movable platforms located in areas with supplemental networks. This suggests the converse, i.e., this suggests an arrangement in which supplemental networks

provide the same service when movable repeaters are unavailable. It would have been obvious to one of ordinary skill in the art to modify the invention of Simon et al. so that a supplemental network communicates directly with a movable platform that is located in an area where there are insufficient movable platforms available to provide a signal to the movable platform, as suggested by Rootsey et al., because such an arrangement would ensure that a communication path always exists.

16. Claims 26, 27, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al. in view of Drummer.

With regard to claim 26, Simon et al. fails to teach that at least one movable platform is a satellite. Drummer teaches that at least one movable platform is a satellite (Fig. 1; column 3, lines 29-31; column 3, line 66 to column 4, line 3). It would have been obvious to one of ordinary skill in the art to modify the invention of Simon et al. so that at least one movable platform is a satellite, as in Drummer, because a satellite could communicate with a large number of movable platforms over a large range because few objects could interfere with communication between the satellite and the movable platforms.

With regard to claims 27 and 37, Simon et al. fails to teach that at least one of the movable platforms is not located on a pathway. Drummer teaches satellites, which are inherently not located along the pathway of a missile; this must be so, for otherwise the missile would destroy the satellite (Fig. 1). It would have been obvious to one of ordinary skill in the art to modify the invention of Simon et al. so that at least one of the movable platforms is not located

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on a pathway, as in Drummer, because such an arrangement would help ensure that collisions between movable platforms do not occur.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wilson et al., Reed et al., Truby, Ellis et al., Andrea, III et al., Toler, Lai, Truby et al., and Mulford are cited to show the state of the art.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Logsdon whose telephone number is (703) 305-2419. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

19. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314

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For informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Joe Logsdon

Patent Examiner

Thursday, December 06, 2001



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